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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,881	09/16/2003	Reinder Teun Plug	081468-0304889	1154

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EXAMINER

MATHEWS, ALAN A

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,881

Applicant(s)

PLUG, REINDER TEUN

Examiner

Alan A. Mathews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 4, line 6 of paragraph # 41, “the developer 12” should apparently be “the developer 14” to be consistent with previous recitations of the developer and subsequent recitations of the developer. Furthermore, numeral “12” has already been used to designate a “coater”.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 20, and 24 -26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita et al. (U. S. Patent Application Publication No. 2002/0155727 A1) in view of Morimoto et al. (U. S. Patent No. 5,668,733). Narita et al. discloses in figure 2 and pages 3 and 4, paragraphs # 45 - # 55, a second embodiment wherein the **order** of introduction of a plurality of substrate lots $A_1 - A_{20}$ into the substrate processing system (e.g. RIE processing) is changed to increase the production efficiency (see paragraph # 55). As shown in figure 2, the right hand column of

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substrate lots $A_1 - A_{20}$ has been rearranged from the left hand column of substrate lots $A_1 - A_{20}$ to increase production efficiency. Increasing the production efficiency is the same thing as increasing the rate of processing and decreasing the time of processing of the plurality of substrate lots. A computer would be making the decisions in Narita as to what order to process the plurality of substrate lots. And a computer would have software code. It is also noted that the many of the claims of the instant application use the expression "at least one of". A reference only needs to show one of the recitations following the expression "at least one of" to read on the claim. Thus, Narita et al. discloses the invention except for obtaining at least one of a rate of process and a time of processing associated with a plurality of substrate lots introduced into a part of the substrate processing system using a processing unit of software code.

Morimoto et al. discloses in column 1, lines 8-12, that substrates are classified in different types of lots so as to be transported to the substrate processing parts in different orders. Morimoto et al. discloses in column 1, lines 65-67, and column 2, lines 1-33, both double flow processing and flex flow processing. Morimoto et al. also discloses in figure 8 a processing unit (or controller) 50, which would have software code. Morimoto et al. discloses in column 7, lines 10-67, and column 8, lines 1-22, "wafer flow" which includes factors like processing time. Column 9, lines 35-37, state that processing time refers to a time required for processing one substrate of the lot B by various treatments at the respective substrate processing units. Morimoto et al. discloses in column 31- lines 10-67, column 32, and column 33, further examples of flex flow where lots A and B are linked. With respect to claim 24, figure 6 and column 6, lines 6-14, in Narita et al. discloses a spin coater SC, spin developers SD1 and SD2, and transportation Zone CC, which forms part of the track. It would have been obvious at the time the invention was made to a

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person having ordinary skill in the art to for provide Narita et al. with a processing unit or software code to obtain at least one of a rate of processing and a time of processing in view of Morimoto et al. for the purpose of improving efficiency of processing and improving throughput.

4. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita et al. (U. S. Patent Application Publication No. 2002/0155727 A1) in view of Morimoto et al. (U. S. Patent No. 5,668,733) and in further view of Iwatsu (U. S. Patent No. 6,268,900). Narita et al. discloses in figure 2 and pages 3 and 4, paragraphs # 45 - # 55, a second embodiment wherein the **order** of introduction of a plurality of substrate lots $A_1 - A_{20}$ into the substrate processing system (e.g. RIE processing) is changed to increase the production efficiency (see paragraph # 55). As shown in figure 2, the right hand column of substrate lots $A_1 - A_{20}$ has been rearranged from the left hand column of substrate lots $A_1 - A_{20}$ to increase production efficiency. Increasing the production efficiency is the same thing as increasing the rate of processing and decreasing the time of processing of the plurality of substrate lots. A computer would be making the decisions in Narita as to what order to process the plurality of substrate lots. And a computer would be a processing unit. Thus, Narita et al. discloses the invention in claim 21 -23 except for the processing unit obtaining at least one of a rate of process and a time of processing associated with a plurality of substrate lots introduced into a part of the substrate processing system using a processing unit and a lithographic apparatus having an illuminator, a support for a patterning device, a substrate table and a projection system. Morimoto et al. discloses in column 1, lines 8-12, that substrates are classified in different types of lots so as to be transported to the substrate processing parts in different orders. Morimoto et al. discloses in column 1, lines 65-67, and

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column 2, lines 1-33, both double flow processing and flex flow processing. Morimoto et al. also discloses in figure 8 a processing unit (or controller) 50, which would have software code. Morimoto et al. discloses in column 7, lines 10-67, and column 8, lines 1-22, "wafer flow" which includes factors like processing time. Column 9, lines 35-37, state that processing time refers to a time required for processing one substrate of the lot B by various treatments at the respective substrate processing units. Iwatsu discloses in figure 1 and column 5, lines 52-64, an exposure apparatus 20 having a wafer table and light radiation means in combination with processing apparatus 18. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Narita et al. with a processing unit or software code to obtain at least one of a rate of processing and a time of processing in view of Morimoto et al. for the purpose of improving efficiency of processing and improving throughput. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Narita et al. with an exposure apparatus in view of Iwatsu for the purpose of improved efficiency in having all parts of the lithographic apparatus in one place.

Conclusion

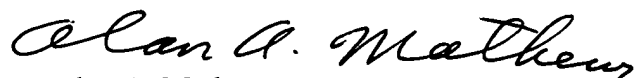
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Tateyama is cited to show processing substrate lots and an exposing unit 4.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews
Primary Examiner
Art Unit 2851

AM